



The David J. Joseph Company

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Division of Solid & Hazardous Waste  
Utah Department of Environmental Quality

March 20, 2002

State of Utah DEQ  
Division of Solid and Hazardous Waste  
Mr. Phil Burns  
288 North 1460 West  
P.O. Box 144880  
Salt Lake City, UT 84114-4880

Re: The David J. Joseph Company/Western Metals Recycling Class IIIb Landfill

Dear Mr. Burns:

Please find enclosed a new Operations Plan for the Western Metals Recycling's Class IIIb landfill located in Plymouth, Utah. This plan reflects modifications to incorporate mining of nonferrous metals from the fluff in the landfill along with additional information requested by your Department per our meeting on January 31, 2002.

Should you have any questions regarding this information, please contact me at (513) 621-8770, Ext. 4459.

Very truly yours,

THE DAVID J. JOSEPH COMPANY

Eric Logsdon  
Staff Engineer

EML/mlb  
Enclosure

cc. Caesar Rodriguez – WMR/Plymouth

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## ADDENDUMS (follow text)

ADDENDUM 1 PCB SAMPLING PROCEDURE

ADDENDUM 2 BORING LOG REPORT

## FIGURES (follow addendums)

FIGURE 1 SITE LOCATION MAP

## **1.0 INTRODUCTION**

This is an updated Operations Report for The David J. Joseph Company's Plymouth Landfill located in Plymouth, Utah. The Operations Report addresses requirements associated with the ongoing landfill operations and the future mining process.

## **2.0 BACKGROUND**

The Plymouth Landfill is located at 7400 W. 21200 North, West Cemetery Road, Plymouth, Utah 84330. It is situated adjacent to a metal shredding facility that generates the waste being deposited.

Active landfill operations occur on approximately 22.5 acres at the west side of the property. Waste is deposited in cells that are prepared by excavating soils, which are then deposited as intermediate cover on already filled cells in the landfill. The subgrade of the landfill consists of pale yellowish brown clayey silt with some gravel changing to silty gravel at 35 feet below land surface. A boring log report is found in Addendum 2.

The groundwater is approximately 90 feet below land surface traveling in a south by southeast direction.

The David J. Joseph Company plans to mine the landfill for extraction of non-ferrous metals from the previously deposited fluff. This will be accomplished by excavating the material from old cells, running the material through an eddy current separation system that will be constructed onsite, then redepositing the material back into a new cell.

## **3.0 LANDFILL OPERATIONS**

The landfill operations are controlled primarily by two persons employed by The David J. Joseph Company and its subsidiary Western Metals Recycling, LLC. These include:

- The General Manager, Mr. Caesar Rodriguez, who has been assigned overall responsibility for operation and maintenance of Plymouth Landfill by The David J. Joseph Company and Western Metals Recycling, LLC.
- The David J. Joseph Company Staff Engineer, Eric Logsdon, who has been assigned the responsibility for periodically monitoring landfill operations and management to assess compliance with applicable laws, regulations, and conditions; and providing/coordinating technical assistance when needed.

The only other organization with specifically-scheduled activities is the environmental sampling and analysis contractor. The David J. Joseph Company currently contracts these services with Global Environmental Technologies LLC.

### **3.1 OPERATIONAL INFORMATION**

#### **3.1.1 Designation of Responsible Person(s)**

The person responsible for the operation and maintenance of the Plymouth Landfill is the General Manager, Mr. Caesar Rodriguez. He can be reached at the following:

Mr. Caesar Rodriguez, General Manager  
Western Metals Recycling, LLC  
7400 W. 21200 North  
West Cemetery Road  
Plymouth, UT 84330  
(435) 458-3851  
(435) 458-3601 (Fax)

For matters involving permitting or enforcement, the person responsible for the Plymouth Landfill is the Staff Engineer, Mr. Eric Logsdon. He can be reached at the following:

Mr. Eric Logsdon, Staff Engineer  
The David J. Joseph Company  
300 Pike Street  
Cincinnati, OH 45202-4214  
(513) 621-8770  
(513) 345-4391 (Fax)

#### **3.1.2 Contingency Operations**

In the event that the landfill cannot be used due to emergency or a natural disaster, the Plymouth Landfill will temporarily refuse to accept waste material. This action should not create a significant public inconvenience, since the Plymouth Landfill accepts waste only from The David. J. Joseph Company & its subsidiaries. If the Landfill experiences a disruption of operations for a significant period of time, the waste stream generated by facility operations will be rerouted and disposed at a commercial solid waste facility.

If normal operations are interrupted due to primary and/or back-up equipment failure, the Landfill Operator must immediately notify the General Manager.

### **3.1.3 Control of Waste Received**

Only fluff and debris from The David J. Joseph Company's own operations are permitted to be disposed in the landfill. Periodic testing is performed on the fluff from the scrap metal recovery process. This testing includes analysis for PCBs, and TCLP RCRA Metals. Samples are collected in accordance with the fluff sampling procedure found in Addendum 1, with results retained in the David J. Joseph Company's corporate office.

The Landfill Operator shall verify that no unacceptable materials are deposited by observing each dumped load of waste material prior to spreading and compacting. If unacceptable materials are observed, they must be loaded onto a truck and transported to an appropriate permitted landfill for disposal.

During operating hours, the Landfill Operator is responsible for monitoring site activities and preventing unauthorized disposal or trespassing. When the landfill is closed, unauthorized disposal shall be inhibited by locking all access gates.

### **3.1.4 Waste Measurement**

The amount of waste shipped to the landfill is estimated based on the total amount of scrap produced at The David J. Joseph Company's shredding operations. This is currently based upon a correlation between the weight of fluff produced versus the weight of scrap processed. Since the landfilled waste is generated only by The David J. Joseph Company's operations, this provides a reasonable estimate of the quantity of incoming waste provided that accurate records of the source of fluff are maintained.

The General Manager maintains summaries of the estimated waste generation quantities.

### **3.1.5 Vehicle Traffic Control and Unloading**

There is a single access road permitting access to the site from the Plymouth scrap metal recycling yard. Since this is a private landfill accepting waste only from The David J. Joseph Company's own operations, no special traffic controls or signs are required.

The Landfill Operator will check incoming trucks upon arrival and will provide the drivers with instruction as to where to dump their loads. While the landfill is below grade, the Landfill

Operator should exercise extreme care during unloading operations. Once the landfill reaches above the surrounding grade, the trucks will resume normal operation and drive directly onto the landfill surface to discharge their loads.

### **3.1.6 Method and Sequence of Filling Waste**

The Landfill Operator shall direct placement of the waste in a manner to maintain thin waste layers, and shall sequence waste filling operations in a way that is conducive to both landfilling and the mining process.

The General Manager is also responsible for assuring the control of odors and fugitive particulates arising from landfill operations. Such control shall prevent the creation of these nuisance conditions on adjoining properties. Experience indicates that this is typically not an issue with fluff landfills.

### **3.1.7 Waste Compaction and Application of Weekly and Intermediate Cover**

Landfill waste will be spread utilizing a bulldozer and/or front-end loader, and be compacted utilizing various pieces of heavy mobile equipment. The fluff will be spread in approximately 1- to 2-foot-thick lifts and compacted by 4 to 5 passes of the equipment.

Periodically, a 6-inch-thick compacted soil cover will cover exposed waste with the exception of the working face. This soil cover will be spread and compacted using the site bulldozer and/or front-end loader. The reason for not placing intermediate cover on a monthly basis is to enhance the performance of the landfill. The nature of the waste being deposited lends itself to benefits from exposure to the atmosphere. The waste during the processing of scrap metal becomes saturated with water. At the point of disposal, the waste may have a moisture content as high as 50% by weight. By not placing the intermediate cover, the low humidity evaporates a significant amount of the water, thus eliminating the generation of leachate.

The perimeter barriers around the landfill are more than adequate at controlling loose or blowing material because the shape, weight and consistency of the waste does not allow it to be caught and carried by the wind. Furthermore, the mining operations would be greatly impeded by the use of intermediate cover during the excavation process.

### **3.1.8 Operations of Gas and Stormwater Controls**

Due to the nature of the waste, a methane gas collection system is not applicable. The material being landfilled consists of plastics, glass, and wood. These components do not rapidly breakdown and form methane gas.

Storm water runoff from the site is controlled by an engineered surface water management system. In this system, surface water runoff from covered portions of the landfill is directed towards a large bermed area to allow for evaporation. The precipitation in this location is minimal averaging only 17 inches per year in a very low humidity climate.

### **3.1.9 Groundwater Monitoring**

Groundwater monitoring is generally performed biannually. The site consists of 5 groundwater monitoring wells strategically placed around the landfill and property. The results of groundwater monitoring events are reviewed and retained in The David J. Joseph Company's corporate office.

Sampling events are analyzed for the following parameters.

- Oil & Grease
- Dissolved Metals
- Total Metals
- TDS / TOC
- TSS
- COD
- Amonia
- Cyanide
- Nitrate

Each time that groundwater samples are collected, the following field parameters shall be recorded:

#### **Field Parameters**

- Static water level in wells prior to purging
- Specific conductance
- pH
- Temperature
- Colors and/or sheens

### **3.1.10 Surface Water Monitoring**

The site has a stormwater discharge permit issued by the state of Utah. Due to the large surface area of the site, a discharge of stormwater has yet to be recorded. Sampling equipment is retained on site in the event a significant rain event occurs resulting in a discharge. The parameters analyzed are found in our stormwater discharge permit.

### **3.1.11 Leachate Monitoring**

The generation of leachate is avoided by controlling the moisture content of the fluff through evaporation, and stormwater running into the open face of the landfill. Since leachate is not generated, a monitoring program has not been established.

### **3.1.12 All Weather Access Roads**

The General Manager shall be responsible for maintaining the access roads in an acceptable condition.

### **3.1.13 Effective Barrier**

When the landfill is not in use, the Landfill Operator will move a steel gate across the site entrance and manually lock it to prevent unauthorized access. The Landfill Operator will not permit unauthorized access or disposal during operating hours.

### **3.1.14 Sign Indicating Name of Operating Authority**

The sign located near the yard entrance and the no trespassing signs posted around the property perimeter shall be maintained. The Landfill Operator is responsible for inspecting the signs and reporting deterioration or damage to the General Manager.

### **3.1.15 Litter Control Devices**

Due to the nature of the fluff (consistency similar to peat moss), no special litter control devices are believed necessary.



### **3.1.16 Fire Protection and Fire-Fighting Facilities**

On-site fire protection equipment consists of small fire extinguishers stored within site equipment. The site bulldozer, and/or front-end loader can also be used to extinguish small fires by spreading dirt over burning matter. A stockpile of at least 100 tons of dirt shall be readily available in the event of a fluff pile fire.

At the end of each operating the day, the bulldozer and all other heavy mobile equipment will not be parked on the working face of the landfill.

### **3.1.17 Attendant**

The Landfill Operator is on-site during all operating hours, and is in control of daily landfill operations.

### **3.1.18 Communication Facilities**

The landfill operator is equipped with a cellular phone and / or radio to summons assistance in the event of an emergency.

### **3.1.19 Adequate In-Service and Reserve Equipment**

In the event that the site equipment is disabled, miscellaneous heavy equipment may be brought out from the operating yard, or rented from a local equipment supplier to keep landfill operations ongoing.

### **3.1.20 Safety Devices on Equipment to Shield and Protect Operators**

Each piece of equipment is equipped with a fire extinguisher to fight small fires. A first-aid kit is available in the office trailer for minor personal injuries. The Landfill Operator will wear steel-toed shoes as personal protective equipment.

## **Addendum 1**

### **PCB Sampling Procedure**

**The David J. Joseph Co.**

**Sample Collection Procedure for PCB Analysis of Automobile Shredder Residue**

**Date: January 7, 2000**

**Purpose:**

This document was written based on interpretations of the Title 40 Part 761 Subpart R – Sampling Non-Liquid, Non Metal PCB Bulk Product Waste for Purposes of Characterization for PCB Disposal.

**Overview:**

This process details the specific procedure that should be followed when collecting a sample of fluff from the generating source. The sample should be collected at the discharge point of the eddy current. If no eddy current exists, then the sample should be collected at the fluff discharge point off the shredder. The sample will be collected over a period of 8 hours of operation. The start time of sample collection will be determined randomly. This number will determine how many minutes after the start of processing that the first 5-gallon sample should be collected. One 5-gallon sample should then be collected every 60 minutes of operation until a total of 8 samples have been collected. The samples will be combined and a representative sample will be collected from this composite.

**Sampling Equipment:**

- 1 steel drum with securing lid (55 gallon capacity)
- 1 drum liner (polyethylene insert)
- 2 clean 5-gallon plastic pails labeled A and B
- 1 new 5-gallon plastic bucket with lid labeled C
- Plastic tarp 12 ft by 12 ft square
- 1 30-sided die
- 1 8-sided die

**Procedure:**

***Step 1***

Prepare a 55-gallon drum by inserting a new polyethylene liner inside the drum. Label the drum as "Fluff Sampling Drum". We have included a label that will identify the drum and allow for tracking of the times for all eight samples that are collected to make up the composite.

***Step 2***

Select a designated employee to conduct the sample collection for one entire sampling event. Instruct all employees that nothing is to be placed in the drum except for the samples collected by the designated employee. Keep a lid on the drum to discourage people from using the container for trash or other debris. Place the drum in a secure location close to the point of fluff generation.

- Step 3** Use the 30-sided die to determine the random start time. Rolling the die and multiplying by 2 determines the number of minutes after initial startup that the first sample should be collected.
- Step 4(a)** To collect the sample, use the clean plastic 5-gallon pail identified as A. Collect 5 gallons of fluff by holding the pail at the edge of the conveyor where the material falls into the truck or pile for disposal. Do this by allowing the material to fill the pail above the rim. Do not compact the sample into the pail when filling. When the pail is completely full, brush off the excess fluff over the edges of the rim to level the sample. If the conveyor system does not safely allow for the collection of the sample at this location, then proceed to the sample collection described in Step 4(b). If the sample is able to be collected via this method, continue with Step 5.
- Step 4(b)** To collect the sample, the conveyor that delivers the fluff to the disposal truck or pile must be shut down. When the conveyor has stopped, the fluff must be scooped off the belt with a hand shovel. Avoid scraping the belt, as the intent is to collect a representative sample, not clean the belt in the sample area. Collect all of the material from the furthest accessible point on the conveyor, back towards the line until the 5-gallon bucket is full.
- Step 5** Note the time that the sample was taken. This time should be written on the drum label. The next sample should be taken after exactly 60 minutes of operation. If the line is shut down for any period of time, the 60-minute timer should be stopped. When the line is restarted, start the 60-minute clock and complete the incomplete portion of the 60-minute interval.
- Step 6** Remove the lid from the 55-gallon drum and empty the 5-gallon sample into the drum. Replace the lid on the 55-gallon drum.
- Step 7** Repeat Step 4, Step 5, and Step 6 until all 8 samples are collected. If the employee designated for collecting the sample is unable to collect the sample at the required time, they must arrange for another qualified individual to continue collecting the samples. If the process of generating fluff is stopped and will not resume until the following day, the lid on the drum should be secured with a bung ring and locked to prevent tampering of the sample. The time the process shuts down should be noted. When the line is restarted the next day, start the 60-minute clock and complete the incomplete portion of the 60-minute interval from the day before.
- Step 8** When the eighth sample is placed in the drum, secure the lid to the drum. Tip the drum on its side and roll it a minimum of 10 complete revolutions. This equates to a total distance of 63 linear feet that the drum must roll.
- Step 9** Open up and lay out the new plastic tarp on a level area. Empty the contents of the 55-gallon drum onto the center of the tarp. Using the 5-

gallon bucket identified as B, make 8 equal piles from the one large pile. These smaller piles will also be placed on the tarp. Number the piles 1 through 8. Use an eight sided die to determine which of the eight samples will be sent in for analysis.

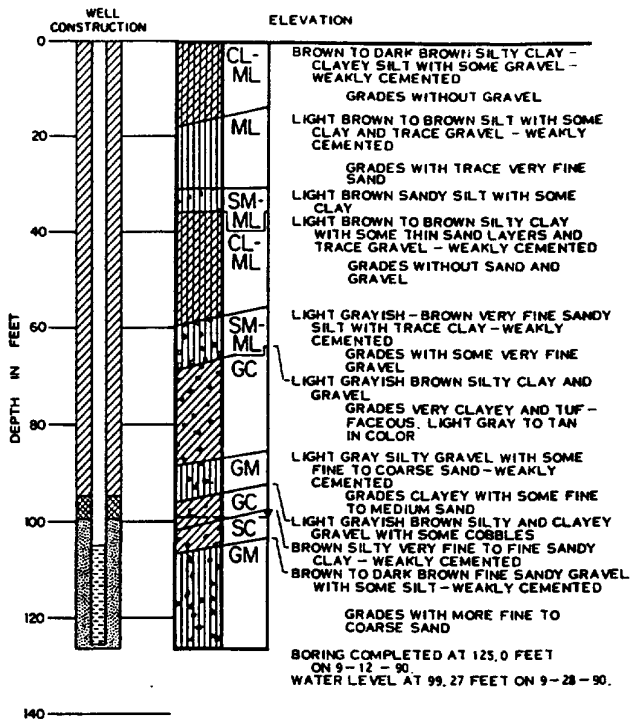
***Step 10*** Place the selected pile in the third 5-gallon bucket, identified as C, and secure the lid on the sample. The sample should be properly identified and sent with a chain of custody document to the appropriate lab. The sample collection date will be the date the sample collection is completed.

Any questions regarding this procedure should be addressed with the David J. Joseph Company's corporate Environmental Health & Safety Staff.

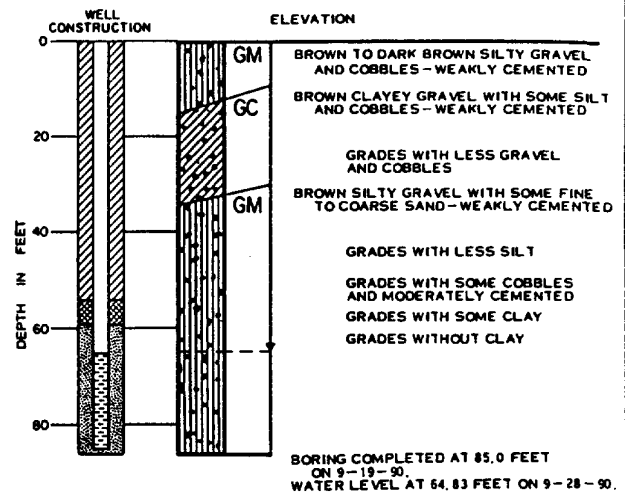
## **Addendum 2**

### **Boring Log Reports**

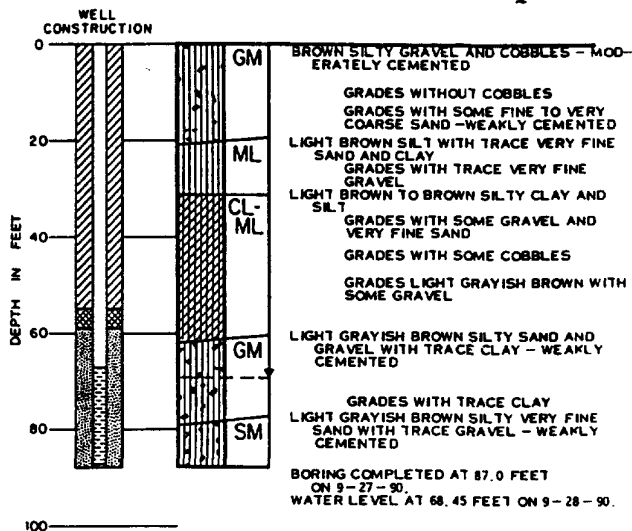
## BORING 1



## BORING 2



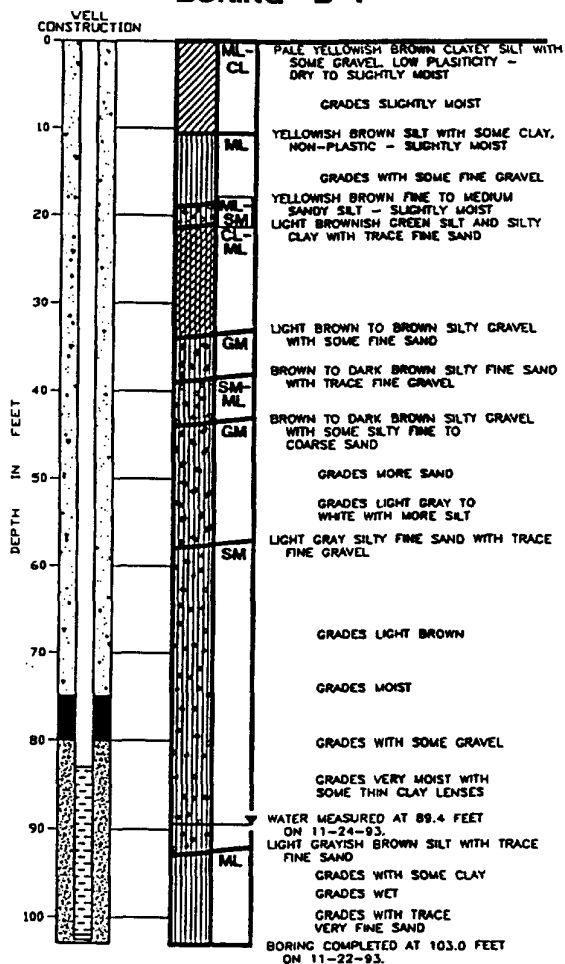
## BORING 3



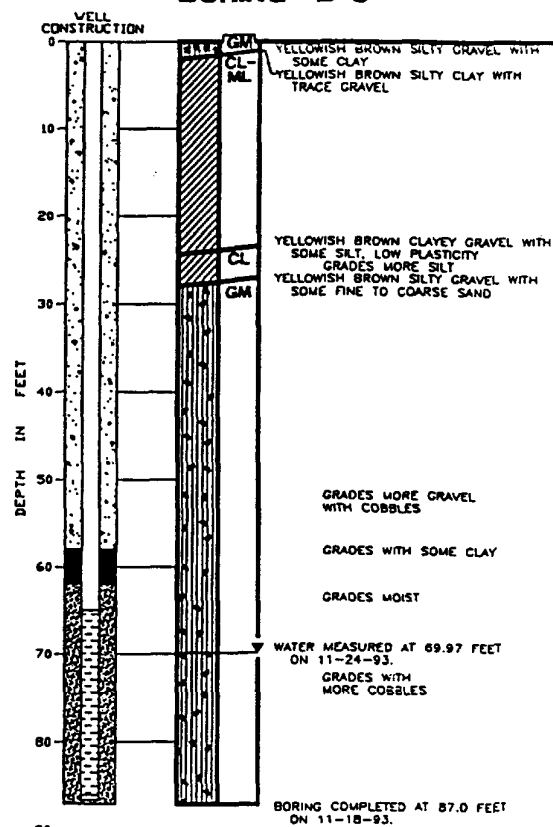
# LOG OF BORINGS

FILE 12209-047-031 (dug\muse\B\J-4-S.d.g) BY \_\_\_\_\_ DATE \_\_\_\_\_ CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

## **BORING B-4**



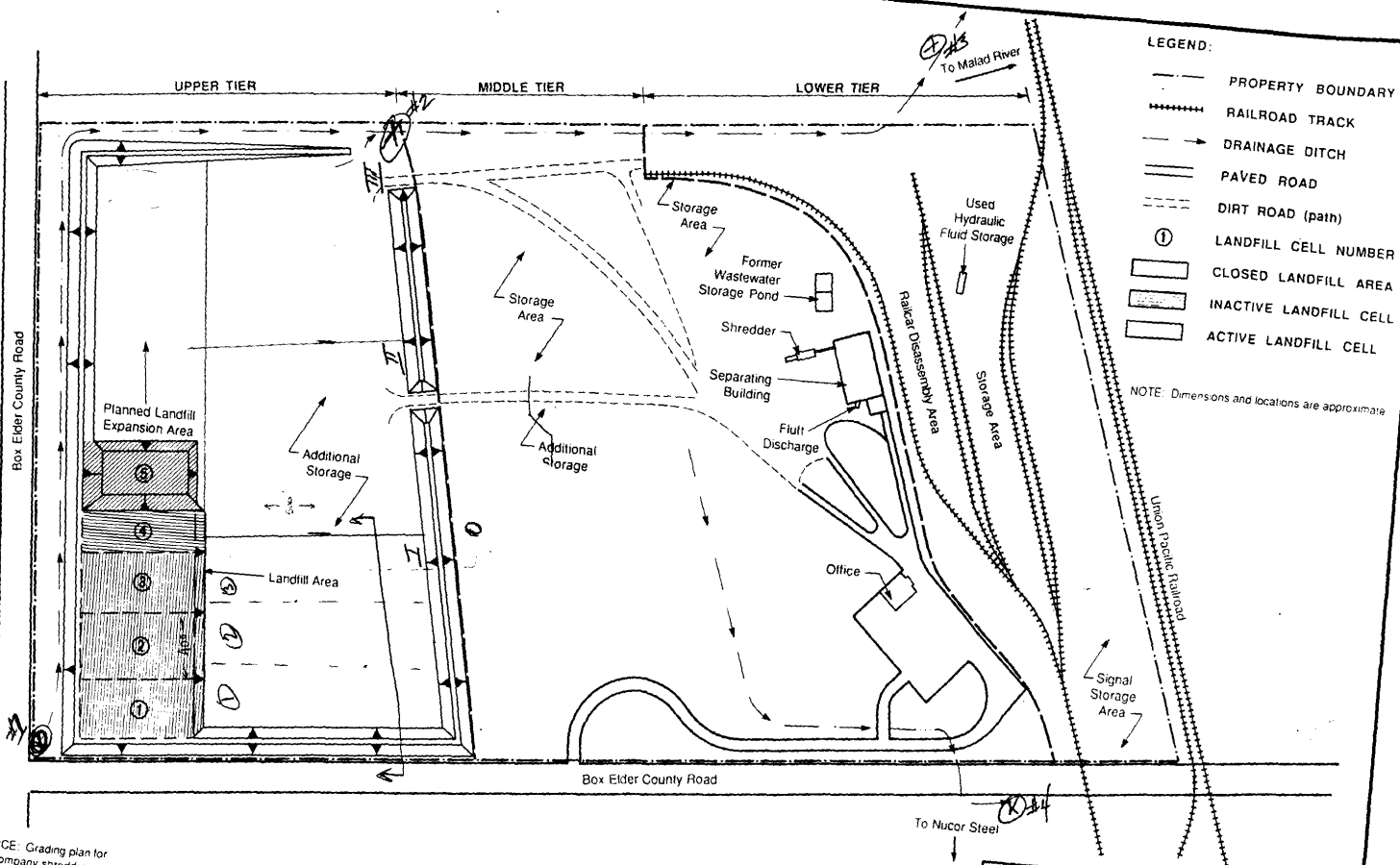
## **BORING B-5**



# **LOG OF BORINGS**



**Figure 1**  
**Site Location Map**



BASE MAP SOURCE: Grading plan for David J. Joseph Company shredding mill site. Onesco Engineering, Inc. Brigham City, Utah, no date given.

0 200 400  
APPROXIMATE SCALE IN FEET



The David J. Joseph Company  
PLYMOUTH, UTAH

FIGURE 1

SITE LAYOUT MAP

JOB NO. 12209-016-120

DAMES & MOORE